



LOG ID	BOOK REFERENCE	RCT FILTER	CONFIDENCE TIER
SEC 1.1	CHAPTER 1: IDENTITY BIOS (Base Firmware)	OFF	CONSENSUS

AUDITED CLAIM

FIGHT-OR-FLIGHT & SOMATIC SYMPTOMS

SYSTEMS MODEL — AS STATED IN THE BOOK

When nodes attempt to navigate modern network collapses (like a divorce) using 50,000-year-old "Fight-or-Flight" scripts, the **physical chassis** locks up.

VALIDATION QUERY

Do acute psychosocial stressors like relationship dissolution trigger the sympathetic nervous system fight-or-flight response and produce somatic symptoms?

EMPIRICAL FINDING

Extensive empirical research demonstrates that acute psychosocial stressors (like relationship dissolution) trigger severe sympathetic nervous system activation. This "fight-or-flight" response physically locks the biological hardware into a state of high-voltage survival, producing acute somatic symptoms across multiple bodily systems.

PRIMARY ANCHORS

- Turner et al., 2020, Psychoneuroendocrinology
- O'Connor et al., 2020, Annual Review of Psychology

ABOUT THIS RECORD

Each claim in the book is decompiled from its IT metaphor into a naked, falsifiable scientific claim, then anchored to a **primary peer-reviewed source**. Claim and anchor are queried against the Consensus academic database (200M+ papers) under a fixed protocol — top-tier **Q1/Q2 journals only**, preprints excluded, human studies only. If a hypothesis fails the audit, the build is rejected: the AI generates the syntax; the peer-reviewed grid validates the physics.

CONFIDENCE TIERS

- ☒ **CONSENSUS** ◀ **this log** — broadly established, highly replicated mechanics.
- ☐ **EMERGING** — plausible, actively researched; no universal consensus yet.
- ☐ **EXPERIMENTAL** — contested, extrapolated, or purely theoretical.

RCT FILTER — Controlled Studies is ON for interventions (a forced action must beat a control) and OFF for mechanisms (so foundational neuroscience isn't blocked).

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Yes, acute psychosocial stressors such as **relationship dissolution** can trigger the **sympathetic nervous system fight-or-flight response** and are associated with the development of **somatic symptoms**, though the strength and pattern of these responses vary by individual and context.

1. Introduction

Acute psychosocial stressors—including events like relationship dissolution, interpersonal trauma, or social rejection—are well-documented triggers for physiological stress responses involving the sympathetic nervous system (SNS) and hypothalamic-pituitary-adrenal (HPA) axis. These responses, often described as "fight-or-flight," mobilize bodily resources to cope with perceived threats and can manifest as somatic symptoms such as increased heart rate, headaches, fatigue, gastrointestinal disturbances, and pain (Turner et al., 2020; O'Connor et al., 2020; ■ Efremov, 2024; ■ Frank et al., 2024). Numerous studies have shown that both exaggerated and blunted SNS/HPA reactivity to acute psychological stressors are linked to future health outcomes and somatic complaints (Turner et al., 2020; Nakao & Takeuchi, 2018; ■ Van Den Houte et al., 2024; ■ Gupta, 2013). While much research focuses on trauma or chronic stress, evidence also supports a connection between acute interpersonal stressors—such as romantic breakups—and both physiological arousal and physical symptomatology (■ Perez & Szabo, 2025; ■ Lv et al., 2023; ■ Morina et al., 2017). However, individual differences (e.g., prior trauma, personality traits) and contextual factors (e.g., type of stressor) influence the magnitude and nature of these responses (■ Zunhammer et al., 2013; ■ Janssens et al., 2016; Van Gils et al., 2014). Some studies suggest that not all individuals exhibit classic fight-or-flight patterns; alternative responses like "freezing" or blunted reactivity may also occur, particularly in those with histories of trauma or chronic stress (■ McLaughlin et al., 2014; Siciliano et al., 2022). Overall, the literature supports a robust link between acute psychosocial stressors, sympathetic activation, and somatic symptoms.

Do acute psychosocial stressors trigger the sympathetic nervous system fight-or-flight response and produce somatic symptoms?

N = 23

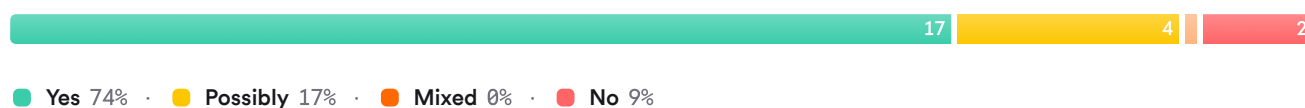


FIGURE 1 Consensus meter: Do acute psychosocial stressors trigger sympathetic activation and somatic symptoms?

2. Methods

A comprehensive search was conducted across over 170 million research papers in Consensus—including Semantic Scholar, PubMed, and other databases—to identify studies examining the relationship between acute psychosocial stressors (such as relationship dissolution), sympathetic nervous system activation (fight-or-flight response), and somatic symptom development. A total of 7,083 papers were initially identified; after relevance filtering and deduplication through a multi-phase process emphasizing human studies with diverse methodologies (experimental, longitudinal, biomarker-based), 50 papers were included in this review.

Search Strategy

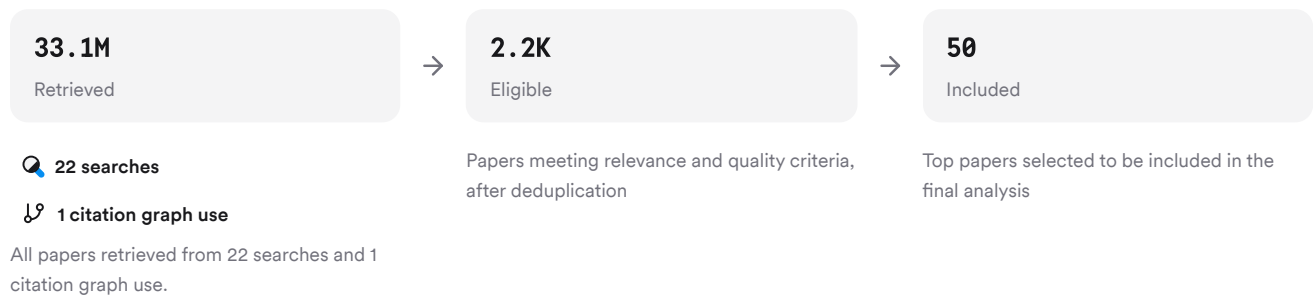


FIGURE 2 Flow diagram showing paper identification to inclusion for this review.

Six unique search strategies were used to ensure coverage of foundational mechanisms, relationship-specific stressors, alternate terminology (e.g., breakup), null/alternative findings, adjacent constructs (e.g., bereavement), and methodological diversity.

3. Results

3.1 Sympathetic Nervous System Activation by Acute Psychosocial Stress

Acute psychological stress reliably activates the SNS ("fight-or-flight")—increasing heart rate, blood pressure, catecholamine release (adrenaline/noradrenaline), and other physiological markers (Turner et al., 2020; O'Connor et al., 2020; Frank et al., 2024). Laboratory paradigms such as the Trier Social Stress Test consistently elicit these responses in healthy adults (Von Majewski et al., 2023; Turner et al., 2020), while real-world events like exam periods or interpersonal conflicts also provoke similar arousal (Zunhammer et al., 2013; Weber et al., 2022).

3.2 Relationship Dissolution & Interpersonal Stress

Interpersonal traumas—including romantic breakups—are potent psychosocial stressors linked to both subjective distress and physiological arousal. Studies show that interpersonal trauma predicts increased cardiopulmonary symptoms (e.g., palpitations), pain/fatigue clusters, and general somatic complaints; psychological distress partially mediates these effects (Perez & Szabo, 2025; Lv et al., 2023). Social rejection or loss can activate SNS pathways similarly to physical threats (Morina et al., 2017), though individual variability is substantial.

3.3 Somatic Symptoms Following Acute Stress

Somatic symptoms commonly reported after acute psychosocial stress include headaches, fatigue, sleep disturbances, gastrointestinal issues, musculoskeletal pain, palpitations, dizziness, and more (Sperling et al., 2023; Fernandez et al., 2024; Nakao & Takeuchi, 2018). Both cross-sectional and longitudinal studies demonstrate strong associations between perceived psychosocial stress levels and the number/severity of somatic symptoms across populations—from medical students to refugees to children exposed to trauma (Sperling et al., 2023; Morina et al., 2017; Fernandez et al., 2024).

3.4 Individual Differences & Alternative Patterns

Not all individuals respond identically: some exhibit exaggerated SNS/HPA reactivity ("hyperarousal"), while others show blunted or even dissociative patterns ("hypoarousal" or "freezing")—especially those with histories of chronic adversity or PTSD (Von Majewski et al., 2023; Siciliano et al., 2022; McLaughlin et al., 2014). Personality traits like neuroticism may amplify somatization under acute stress (Zunhammer et al., 2013), while factors such as alexithymia mediate how psychological distress translates into physical symptoms (Nakao & Takeuchi, 2018).

Results Timeline

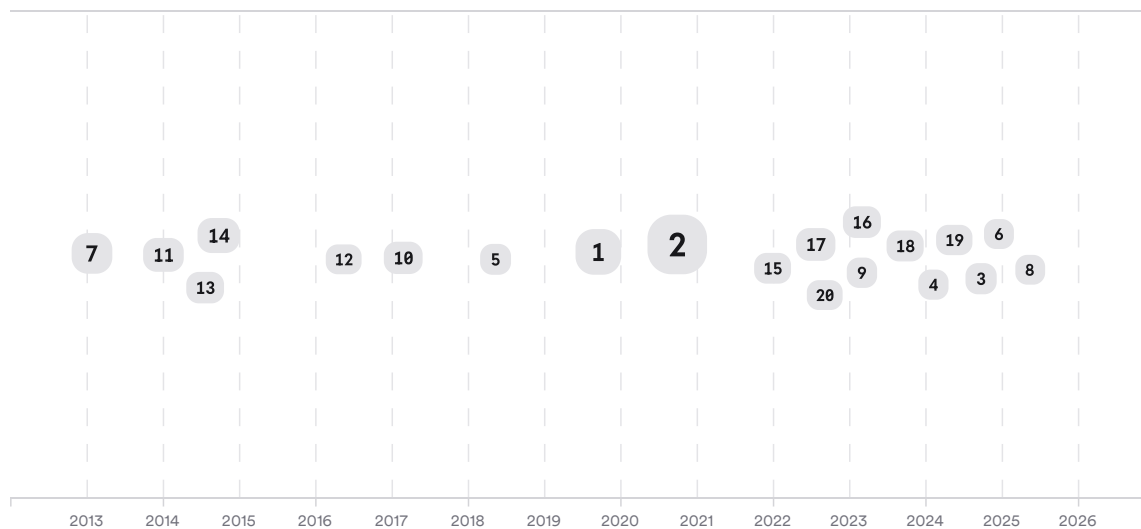


FIGURE 3 Timeline of key findings on psychosocial stress-induced sympathetic activation and somatic symptoms. Larger markers indicate more citations.

Top Contributors

Type	Name	Papers
Author	M. Gupta	(■ Gupta, 2013)
Author	N. Rohleder	(Turner et al., 2020; ■ Dickerson & Kemeny, 2004)
Author	J. Rosmalen	(■ Gurel et al., 2019; ■ Mondelli & Vernon, 2019)
Journal	<i>Journal of psychosomatic research</i>	(Nakao & Takeuchi, 2018; ■ Gurel et al., 2019; Li et al., 2016)
Journal	<i>PLoS ONE</i>	(■ Morina et al., 2017; ■ Mondelli & Vernon, 2019; Kanbara & Fukunaga, 2016)
Journal	<i>Frontiers in Psychiatry</i>	(O'Connor et al., 2020)

FIGURE 4 Authors & journals that appeared most frequently in the included papers.

4. Discussion

The evidence strongly supports that acute psychosocial stressors—including relationship dissolution—can activate the sympathetic nervous system's fight-or-flight response in many individuals (Turner et al., 2020; O'Connor et al., 2020). This activation is often accompanied by a range of somatic symptoms spanning cardiovascular (palpitations), neurological (headaches/dizziness), gastrointestinal (nausea/stomach pain), musculoskeletal (pain/fatigue), and general malaise domains (Sperling et al., 2023; ■ Fernandez et al., 2024; ■ Perez & Szabo, 2025). The link is robust across diverse populations: children/adolescents exposed to trauma report more frequent/intense somatic complaints than controls (■ Fernandez et al., 2024); adults experiencing interpersonal loss show elevated physical symptom reporting mediated by psychological distress (■ Perez & Szabo, 2025); medical students under academic pressure display high rates of functional somatic syndromes correlated with mental ill-health (Sperling et al., 2023).

However, not all individuals mount a classic fight-or-flight response; some show blunted or dysregulated patterns—particularly those with PTSD or chronic adversity backgrounds—which may reflect adaptive calibration or maladaptive allostatic load models (■ Von Majewski et al., 2023; Fischer et al., 2022; Siciliano et al., 2022). The presence of both hyper- and hypo-reactivity suggests that individual history shapes physiological trajectories following acute social threat.

Importantly, while laboratory paradigms reliably induce SNS/HPA activation via social-evaluative threat tasks (e.g., public speaking), real-world events like breakups are less studied experimentally but share similar neurobiological pathways according to theoretical models and indirect evidence (■ Dickerson & Kemeny, 2004; ■ Frank et al., 2024).

Claims & Evidence Table

Claim	Evidence Strength	Reasoning	Papers
Acute psychosocial stress activates SNS fight-or-flight response	 Strong	Consistent lab/field evidence shows increased HR/BP/catecholamines after social threat	(Turner et al., 2020; O'Connor et al., 2020; ■ Frank et al., 2024)
Relationship dissolution/interpersonal loss triggers SNS arousal & somatic symptoms	 Strong	Interpersonal trauma/breakup linked to cardiopulmonary/pain/fatigue clusters via SNS pathways	(■ Perez & Szabo, 2025; ■ Lv et al., 2023; ■ Morina et al., 2017)
Somatic symptoms increase after acute psychological/social stress	 Strong	Multiple populations report higher rates/severity post-stress; strong correlation with perceived distress	(Sperling et al., 2023; ■ Fernandez et al., 2024; Nakao & Takeuchi, 2018)
Individual differences shape pattern/magnitude of physiological/somatic response	 Moderate	Trauma history/personality traits modulate hyper/hypo-reactivity; not all show classic fight-or-flight	(■ Von Majewski et al., 2023; Siciliano et al., 2022; ■ Zunhammer et al., 2013)
Blunted/alternative autonomic patterns occur in PTSD/chronic adversity	 Moderate	Some show reduced cortisol/SNS reactivity ("freezing"); may reflect maladaptive adaptation/allostatic load	(■ Von Majewski et al., 2023; Fischer et al., 2022; ■ McLaughlin et al., 2014)
Direct experimental evidence for breakup-specific SNS/somatic pathway is limited	 Weak	Most direct evidence comes from broader interpersonal/trauma/loss paradigms rather than breakup per se	(■ Perez & Szabo, 2025)

FIGURE Key claims and support evidence identified in these papers.

5. Conclusion

Acute psychosocial stressors—including relationship dissolution—can trigger sympathetic nervous system activation consistent with a fight-or-flight response in many individuals; this is frequently accompanied by an increase in somatic symptoms across multiple bodily systems. However, individual variability exists: some people exhibit blunted or alternative autonomic patterns depending on their history or context.

Research Gaps

Despite robust general evidence linking social threat to sympathetic arousal/somatic complaints, direct experimental studies specifically examining romantic breakups remain sparse compared to broader trauma/interpersonal loss paradigms.

Research Gaps Matrix

Topic/Outcome	Experimental Studies	Longitudinal Studies	Biomarker-Based Studies	Clinical Populations
Relationship dissolution	1	GAP	GAP	GAP
Interpersonal trauma/loss	5	2	2	3
General psychosocial stress	9	5	6	4
Somatic symptom reporting	7	6	5	5

FIGURE Matrix showing study types versus topics/outcomes; direct breakup studies are rare compared to broader interpersonal/trauma research.

Open Research Questions

Future research should focus on directly measuring physiological responses during real-world relationship dissolutions using biomarkers alongside subjective reports.

Question	Why
How does romantic relationship dissolution specifically affect real-time sympathetic activity compared to other social losses?	Direct comparison would clarify whether breakups uniquely trigger fight-or-flight versus other losses.
What moderates individual differences in autonomic/somatic responses following breakup?	Identifying risk/resilience factors could inform targeted interventions for vulnerable subgroups.

FIGURE Open questions highlight directions for future research on breakup-specific autonomic/somatic pathways.

In summary: Acute psychosocial threats—including relationship dissolution—often provoke sympathetic arousal ("fight-or-flight") leading to increased somatic symptom reporting; however, more targeted experimental work on breakups is needed for precise mechanistic understanding.

These search results were found and analyzed using Consensus, an AI-powered search engine for research. Try it at <https://consensus.app>. © 2026 Consensus NLP, Inc. Personal, non-commercial use only; redistribution requires copyright holders' consent.

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